

IN THE CLAIMS:

Please amend claims as indicated in the complete listing of claims provided below.

1. (Currently Amended) A method for execution by a microprocessor in response to receiving a single instruction, the method comprising:
receiving a first plurality of numbers and a second plurality of numbers, each of the first plurality of numbers pointing to one of a plurality of entries, each of the plurality of entries being in one of a plurality of look-up tables; and
replacing simultaneously the plurality of entries in the plurality of look-up tables with the second plurality of numbers;
wherein the above operations are performed in response to the microprocessor receiving the single instruction;
wherein the microprocessor comprises a media processor integrated with a memory controller for host memory on a single integrated circuit.
2. (Currently Amended) A method as in claim 1 wherein the first plurality of numbers are received from a first entry in a register file; and the second plurality of numbers are received from a second entry in the register file; ~~and wherein the microprocessor is a media processor integrated with a memory controller on a single integrate circuit.~~
3. (Original) A method as in claim 2 wherein the single instruction specifies indices of the first and second entries in the register file.
4. (Original) A method for execution by a microprocessor in response to receiving a single instruction, the method comprising:

replacing at least one entry in at least one of a plurality of look-up units in a microprocessor unit with at least one number using a Direct Memory Access (DMA) controller;
wherein the above operations are performed in response to the microprocessor receiving the single instruction.

5. (Original) A method for execution by a microprocessor in response to receiving a single instruction, the method comprising:
replacing at least one entry for each of a plurality of look-up units in a microprocessor with a plurality of numbers using a Direct Memory Access (DMA) controller;
wherein the above operations are performed in response to the microprocessor receiving the single instruction.
6. (Original) A method as in claim 5 wherein a single index encoded in the instruction specifies a location of the at least one entry in the plurality of look-up units.
7. (Original) A method as in claim 5 wherein a single index encoded in the instruction specifies a total number of the at least one entry for each of a plurality of look-up units.
8. (Currently amended) A method as in claim 5 wherein a source address of the plurality of numbers in host memory is specified in an entry of a register file.
9. (Original) A method as in claim 8 wherein the single instruction specifies an index of the entry in the register file.

10. (Original) A method as in claim 5 wherein an identity number encoded in the single instruction specifies the DMA controller.
11. (Original) A method for execution by a microprocessor in response to receiving a single instruction, the method comprising:
 - receiving a plurality of numbers;
 - partitioning look-up memory into a plurality of look-up tables;
 - looking up simultaneously a plurality of elements from the plurality of look-up tables,
 - each of the plurality of elements being in one of the plurality of look-up tables
 - and being pointed to by one of the plurality of numbers;
 - wherein the above operations are performed in response to the microprocessor receiving the single instruction.
12. (Original) A method as in claim 11 wherein the receiving a plurality of numbers comprises:
 - partitioning a string of bits into a plurality of segments to generate the plurality of numbers.
13. (Original) A method as in claim 12 wherein the single instruction specifies format information in which the plurality of numbers are stored in the string of bits.
14. (Original) A method as in claim 11 wherein the look-up memory comprises a plurality of look-up units, and wherein said partitioning look-up memory comprises:
 - configuring the plurality of look-up units into the plurality of look-up tables.

15. (Currently Amended) A method as in ~~claim 11~~ claim 12 wherein the string of bits is received from an entry of a register file.
16. (Original) A method as in claim 15 wherein the single instruction specifies an index of the entry.
17. (Original) A method as in claim 11 further comprising:
storing the plurality of elements in an entry of a register file.
18. (Original) A method as in claim 17 wherein the single instruction specifies an index of the entry.
19. (Original) A method as in claim 17 wherein the single instruction specifies format information in which the plurality of elements are stored in the entry.
20. (Currently Amend) A method as in ~~claim 14~~ claim 11 the look-up memory comprises a plurality of look-up units, and wherein said partitioning look-up memory comprises: configuring the plurality of look-up units into the plurality of look-up tables;
wherein each of the plurality of look-up units comprises 256 8-bit entries.
21. (Original) A method as in claim 11 wherein the single instruction specifies a total number of entries contained in each of the plurality of look-up tables.
22. (Original) A method as in claim 21 wherein the total number of entries is one of:

- a) 256;
- b) 512; and
- c) 1024.

23. (Original) A method as in claim 11 wherein the single instruction specifies a total number of bits used by each entry contained in the plurality of look-up tables.

24. (Original) A method as in claim 21 wherein the total number of bits is one of:

- a) 8;
- b) 16; and
- c) 24.

25. (currently amended) A machine readable media containing an executable computer program instruction which when executed by a digital processing system causes said system to perform a method comprising:

receiving a first plurality of numbers and a second plurality of numbers, each of the

first plurality of numbers pointing to one of a plurality of entries, each of the

plurality of entries being in one of a plurality of look-up tables; and

replacing simultaneously the plurality of entries in the plurality of look-up tables with

the second plurality of numbers;

wherein the above operations are performed in response to the microprocessor

receiving the single instruction;

wherein the microprocessor comprises a media processor integrated with a memory controller for host memory on a single integrated circuit.

26. (Original) A media as in claim 25 wherein the first plurality of numbers are received from a first entry in a register file; and the second plurality of numbers are received from a second entry in the register file.
27. (Original) A media as in claim 26 wherein the single instruction specifies indices of the first and second entries in the register file.
28. (Original) A machine readable media containing an executable computer program instruction which when executed by a digital processing system causes said system to perform a method comprising:
replacing at least one entry in at least one of a plurality of look-up units in a
microprocessor unit with at least one number using a Direct Memory Access
(DMA) controller;
wherein the above operations are performed in response to the microprocessor
receiving the single instruction.
29. (Original) A machine readable media containing an executable computer program instruction which when executed by a digital processing system causes said system to perform a method comprising:
replacing at least one entry for each of a plurality of look-up units in a microprocessor
with a plurality of numbers using a Direct Memory Access (DMA) controller;
wherein the above operations are performed in response to the microprocessor
receiving the single instruction.

30. (Original) A media as in claim 29 wherein a single index encoded in the instruction specifies a location of the at least one entry in the plurality of look-up units.
31. (Original) A media as in claim 29 wherein a single index encoded in the instruction specifies a total number of the at least one entry for each of a plurality of look-up units.
32. (Original) A media as in claim 29 wherein a source address of the plurality of numbers is specified in an entry of a register file.
33. (Original) A media as in claim 32 wherein the single instruction specifies an index of the entry in the register file.
34. (Original) A media as in claim 29 wherein an identity number encoded in the single instruction specifies the DMA controller.
35. (Original) A machine readable media containing an executable computer program instruction which when executed by a digital processing system causes said system to perform a method comprising:
 - receiving a plurality of numbers;
 - partitioning look-up memory into a plurality of look-up tables;
 - looking up simultaneously a plurality of elements from the plurality of look-up tables,
 - each of the plurality of elements being in one of the plurality of look-up tables
 - and being pointed to by one of the plurality of numbers;

wherein the above operations are performed in response to the microprocessor receiving the single instruction.

36. (Original) A media as in claim 35 wherein said receiving a plurality of numbers comprises:
partitioning a string of bits into a plurality of segments to generate the plurality of numbers.
37. (Original) A media as in claim 36 wherein the single instruction specifies format information in which the plurality of numbers are stored in the string of bits.
38. (Original) A media as in claim 35 wherein the look-up memory comprises a plurality of look-up units, and wherein said partitioning look-up memory comprises:
configuring the plurality of look-up units into the plurality of look-up tables.
39. (currently amended) A media as in ~~claim 35~~ claim 36 wherein the string of bits is received from an entry of a register file.
40. (Original) A media as in claim 39 wherein the single instruction specifies an index of the entry.
41. (Original) A media as in claim 35 wherein the method further comprises:
storing the plurality of elements in an entry of a register file.

42. (Original) A media as in claim 41 wherein the single instruction specifies an index of the entry.
43. (Original) A media as in claim 41 wherein the single instruction specifies format information in which the plurality of elements are stored in the entry.
44. (Original) A media as in claim 38 wherein each of the plurality of look-up units comprises 256 8-bit entries.
45. (Original) A media as in claim 35 wherein the single instruction specifies a total number of entries contained in each of the plurality of look-up tables.
46. (Original) A media as in claim 45 wherein the total number of entries is one of:
a) 256;
b) 512; and
c) 1024.
47. (Original) A media as in claim 35 wherein the single instruction specifies a total number of bits used by each entry contained in the plurality of look-up tables.
48. (Original) A media as in claim 47 wherein the total number of bits is one of:
a) 8;
b) 16; and
c) 24.

49. (new) A method as in claim 5 wherein the at least one entry for each of the plurality of look-up units comprises a plurality of entries for each of the plurality of look-up units.
50. (new) A method as in claim 11 wherein the microprocessor comprises a media processor integrated with a memory controller for host memory on a single integrated circuit.